

14271STUS01U

policy directory 60 via an interface 62 and to the broadband aggregation device 40 via network access service interface device 64.

Operation of the proximity management server will be described with reference to Fig. 3, in which there is illustrated in a functional block diagram the scheduler of Fig. 2. The scheduler 50 includes a service matrix 70 with inputs 72 for location time, user name and device ID and inputs 74 for content, local services and transport services. Based upon the service matrix 70 a list of possible services 76 is provided to the policy block 80, which may have optional user and device lookup input 82. After applying the policy to the possible services a list of permissible services 84 is provided to a delivery selector 86 and transport enabler 88.

In Fig. 2, the service definition block 52 includes a service definition table having a list of defined services. The location definition block includes a location table that lists all the configured access point locations whose proximity services are provided by the proximity management server 42 and a location group table listing all logical groupings of access points. The location group table allows services to be offered to a set of grouped accessed points.

The local access points aggregated or otherwise generate key information for the proximity management server. This information includes time, location and user/device information. Services are defined in a matrix in the server. Services can be control points for local devices, links to proximity relevant sites, transport related services such as quality of service, virtual private network (VPN) and voice access to PSTN or cellular telephone networks or Internet access. Services are either transport related or content related. A list of possible services is created by matching information passed from the access points against the services defined in the matrix 70. The list of services is further reduced by applying policy against the list of services at block 80. Determination of policy may involve some lookup into a user/device database via input 82. Once the list of permissible services has been established the list must be delivered. If the services are content based, then the delivery selector chooses between several options for delivery. For example web re-director or object push. If the services are transport based then an optional module

14271STUS01U

may be required to enable changes to infrastructure equipment such as switches or routers to enable the transport portion of the service. Infrastructures using a consistent policy approach such as per side policy services may not require a transport enabler. Global content services include content from a user's content providers, content from content providers that partner with service providers who install the service, and content from a third party content provider. Local content services are provided via links to web sites of proximity vendors or links to service provider provided web space, for technology challenged vendors.

The proximity management server ensures local device control via the wireless proximity network. This answers the need to have network-enabled devices offered to the wireless network. Devices such as printers, scanners, projectors and even vending machines could be controlled using portable devices within the proximity network, provided the service matrix and policy allow such control.

A number of different proximity transport services are possible, these may include virtual, private network (VPN), voice accessed PSTN or cell and internet access.

Service delivery/availability is defined from a matrix which includes: service type, location, time, and user group. Services are defined in a services table; groups of users – or individual users are defined in a user group table; locations identify the location of access points. The main scheduling table contains a list of combinations of “time, location, group and services”.

Table A: Example - Location Definitions

LOCATION NAME	LOCATION DESCRIPTION
FWP_G11_N1	Fenway Park gate 11, node 1
FWP_FL_BOOTH8	Fenway Park, Field level, concession booth 8

14271STUS01U

FWP_SECTION32_34	Fenway Park, coverage for seat sections 32-34
FWP_ADMIN	Administration Offices
FWP_LUXURYBOX_15	Luxury box #15 in Fenway Park

Table B - Example Groupings:

GROUP NAME	MEMBERS
FWP Global Services	FWP*
FWP Seating Areas	FWP_SECTION*
FWP Box Seats Services	FWP_LUXURYBOX*

5 Table C - Example Defined Services List:

SERVICE NAME	SERVICE DESCRIPTION	SERVICE TYPE	SERVICE LINK
McDonald's Store #2212	Local Web site for McDonald's concession stand	Web Page	http://stores.mcdonalds.com/store.asp?id=2212
Coke machine #298392	Control applet for Coke machine near gate 23	Jini applet	Localhost/jini/coke.jin